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WHAT IS CLAIMED IS:

1. A rotary drill bit assembly comprising:
 a rotary drill bit body having a top working
surface and a slot extending transversely across said
top working surface, said slot including a first
sidewall, an opposite second sidewall and a first
bottom surface extending between said first sidewall
and said second sidewall;

an insert positioned within said slot, said
10 insert including a second bottom surface having a
U-shaped depression formed therein, said first bottom
surface having a U-shaped projection such that said
projection supports said depression.

- 2. The rotary drill bit assembly according 15 to claim 1 wherein a vertical surface portion of said U-shaped projection provides mechanical resistance to displacement of said insert from said slot.
- 3. The rotary drill bit assembly according to claim 1 wherein the U-shaped depression forms a void 20 that makes said insert approximately between 30%-50% by weight less than an insert of equal dimension without a depression therein.
- 4. The rotary drill bit assembly according to claim 1 wherein said slot has a plurality of25 protuberance means for enhancing brazing.
 - 5. The rotary drill bit assembly according to claim 4 wherein said U-shaped projection in said slot has said protuberance means for enhancing brazing.
- 6. The rotary drill bit assembly according to claim 4 wherein said first and second sidewalls have protuberance means for enhancing brazing.

- 7. The rotary drill bit assembly according to claim 4 wherein said U-shaped depression is smooth and does not include any sharp corners.
- 8. The rotary drill bit assembly according to claim 4 wherein the insert is connected to said bit body by brazing.
 - 10. A bit body comprising:

a slot wherein said slot includes a U-shaped projection.

- 10 11. The bit body according to claim 10 further comprising:
 - a cylindrical section; and
 - a top working surface.
- 12. The bit body according to claim 11
 15 wherein said top working surface includes a pair of trailing surfaces and compression surfaces.
 - 13. The bit body according to claim 10 wherein said U-shaped projection has a plurality of protuberance means for enhancing brazing.
- 20 14. The bit body according to claim 13 wherein the protuberance means are ridges.
 - 15. The bit body of claim 10 wherein said bit body includes a generally cylindrical section having dust collection openings therein.
- - 17. A bit insert comprising:
 - a pair of oppositely facing generally
- 30 parallel side surfaces, a pair of oppositely inclined

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top surfaces extending between said side surfaces and a U-shaped depression extending upward from the bottom of said insert.

- 18. The bit insert according to claim 17

 5 wherein the U-shaped depression forms a void that makes said insert approximately between 30%-50% by weight less than an insert of equal dimension without a depression therein.
- 19. The bit insert according to claim 17
 10 wherein said U-shaped depression is smooth and does not include any sharp corners.
 - 20. The bit insert according to claim 17 wherein a vertical surface portion of said U-shaped depression provides mechanical resistance to displacement from a bit body.
 - 21. The bit insert according to claim 20 wherein said vertical surface portion is generally between .05-.10 inches in height.
- 22. A bit body for receiving a bit insert comprising a slot having a bottom surface with a nonlinear irregular shape whereby said bottom surface overall surface contact area is increased for the application of braze.
- 23. A bit body according to claim 22 wherein 25 said bottom surface includes protuberance means.
 - 24. A bit insert for attachment to a bit body comprising a bottom surface having a nonlinear irregular shape whereby said bottom surface overall surface contact area is increased for the application of braze.